

Upon entry of this amendment, the following changes shall be incorporated into the specification with regard to the Claims in the pending application:

AMENDMENTS TO THE CLAIMS

Claims 1-38 (withdrawn)

Claim 39. (new): A non-aqueous well bore treatment fluid for selectively reducing the outflow of water during recovery of hydrocarbons from a hydrocarbon reservoir in a formation, the fluid containing 5 to 40 weight per cent of a water-immiscible dissolved compound based on α -branched carboxylic acid, derivatives or co-polymers thereof, and capable of forming a precipitate that is substantially soluble in hydrocarbons and substantially insoluble in water.

Claim 40 (new): A well bore treatment fluid according to claim 39, wherein the precipitate is soluble to at least 5.0 wt % in hydrocarbons.

Claim 41 (new): A well bore treatment fluid according to claim 40, wherein the precipitate is soluble to at least 10.0 wt % in hydrocarbons.

Claim 42 (new): A well bore treatment fluid according to claim 39, wherein the precipitate is less than 1.0 wt % soluble in water.

Claim 43 (new): A well bore treatment fluid according to claim 42, wherein the precipitate is less than 0.10 wt % soluble in water.

Claim 44 (new): A well bore treatment fluid according to claim 39, wherein the melting point of the precipitate is over 50°C.

Claim 45 (new): A well bore treatment fluid according to claim 44, wherein the melting point of the precipitate is over 100°C.

Claim 46 (new): A well bore treatment fluid according to claim 39, which is solvent-based.

Claim 47 (new): A well bore treatment fluid according to claim 39, which is oil-based.

Claim 48 (new): A well bore treatment fluid according to claim 39, which is based on a mixture of solvent and oil.

Claim 49 (new): A well bore treatment fluid according to claim 39 which, is based on a mixture of solvent and water.

Claim 50 (new): A well bore treatment fluid according to claim 39, wherein the precipitate is a divalent or trivalent metal salt of an α -branched carboxylic acid.

Claim 51 (new): A well bore treatment fluid according to claim 50, wherein the precipitate has the structure:



wherein:

R_1 is a $\text{C}_{30}\text{-C}_5$ aliphatic group having a $\text{C}_{20}\text{-C}_4$ linear chain bonded at a terminal carbon atom thereof (the α carbon atom) to the carbon atom of the carboxyl (COO) group, and further having at least one C_1 , C_2 or C_3 side group bonded to said terminal carbon atom, and

M is a divalent or trivalent metal cation.

Claim 52 (new): A well bore treatment fluid according to claim 51, wherein two of said side groups are bonded to said terminal carbon atom.

Claim 53 (new): A well bore treatment fluid according to claim 51, wherein the precipitate has the structure:



wherein:

R₂ is a C₁₀-C₃₀ cyclyl group bonded at a carbon atom thereof (the α carbon atom) to the carbon atom of the carboxyl (COO) group, and having at least one C₁, C₂ or C₃ side group bonded to the α carbon atom, and

M is a divalent or trivalent metal cation.

Claim 54 (new): A well bore treatment fluid according to claim 53, wherein R₂COO⁻ is an abietate group.

Claim 55 (new): A well bore treatment fluid according to claim 39, wherein the compound is immiscible in a solvent fully miscible with water.

Claim 56 (new): A well bore treatment fluid according to claim 39, wherein the α-branched carboxylic acid is abietic acid.

Claim 57 (new): A well bore treatment fluid according to claim 56, wherein the precipitate is a divalent or trivalent metal salt of abietic acid.

Claim 58 (new): A well bore treatment fluid according to claim 56, wherein the precipitate is polymerised abietic acid.

Claim 59 (new): A well bore treatment fluid according to claim 56, wherein the precipitate is a divalent or trivalent metal salt of polymerised abietic acid.

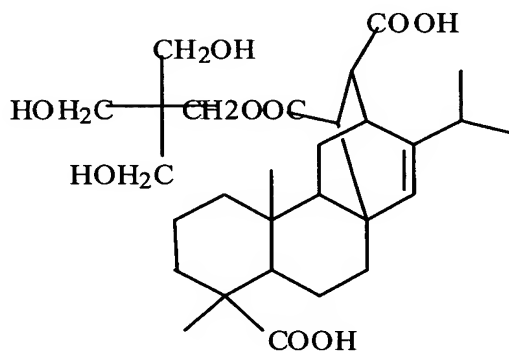
Claim 60 (new): A well bore treatment fluid according to claim 56, wherein the precipitate is a phenolic co-polymer of abietic acid.

Claim 61 (new): A well bore treatment fluid according to claim 39, wherein the dissolved compound is a divalent or trivalent metal salt.

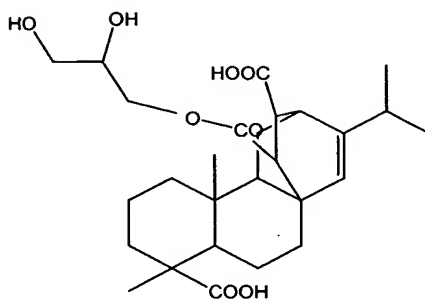
Claim 62 (new): A well bore treatment fluid according to claim 61, wherein the divalent metal is selected from the group consisting of calcium, magnesium and zinc.

Claim 63 (new): A well bore treatment fluid according claim 39, wherein said dissolved compound is a precursor, the precursor being degradable to form the carboxylate anion of a divalent or trivalent metal salt.

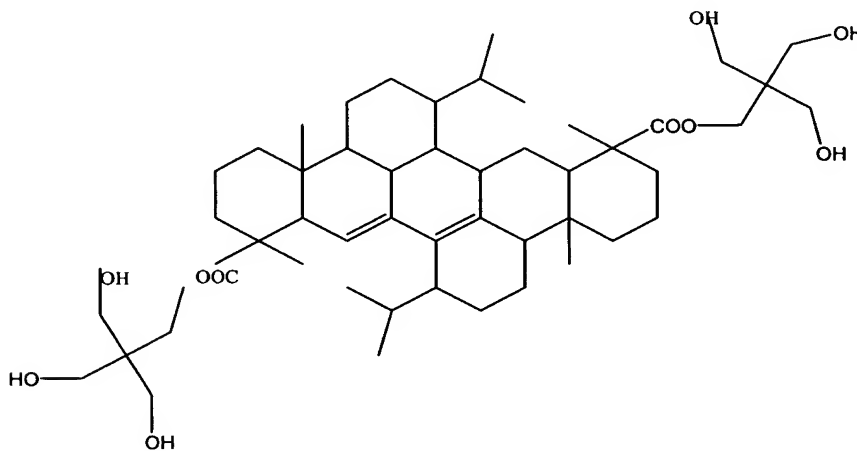
Claim 64 (new): A well bore treatment fluid according to claim 39, wherein the precipitate has the structure:



Claim 65 (new): A well bore treatment fluid according to claim 39, wherein the precipitate has the structure:



Claim 66 (new): A well bore treatment fluid according to claim 39, wherein the precipitate has the structure:



Claim 67 (new): A method of reducing the outflow of water during recovery of hydrocarbons from a hydrocarbon reservoir in a formation, comprising:

(a) providing a well bore treatment fluid containing 5 to 40 weight per cent of a water-immiscible dissolved compound based on α -branched carboxylic acid, derivatives or co-polymers thereof, and capable of forming a precipitate that is substantially soluble in hydrocarbons and substantially insoluble in water, and

(b) injecting said treatment fluid into a well bore; and

(c) letting the fluid permeate formation surrounding the well bore to reduce the outflow of water therefrom.

Claim 68 (new): A method according to claim 67, further comprising the step of injecting acid into the well bore.

Claim 69 (new): A method according to claim 67, further comprising the step of delaying precipitation.

Claim 70 (new): A method according to claim 69, wherein precipitation is delayed by injecting a spacer fluid into the formation before the treatment fluid.

Claim 71 (new): A method according to claim 67, further comprising the step of injecting water or brine into the formation.

Claim 72 (new): A method according to claim 67, further comprising the step of reversing flow direction in the well bore to resume hydrocarbon production.

Claim 73 (new): A method of reducing the outflow of water during recovery of hydrocarbons from a hydrocarbon reservoir in a formation, comprising:

(a) providing a well bore treatment fluid containing 5 to 40 weight per cent of a water-immiscible dissolved compound based on α -branched carboxylic acid, derivatives or co-polymers thereof, and capable of forming a precipitate that is substantially soluble in hydrocarbons and substantially insoluble in water, and

(b) injecting said treatment fluid into a well bore;

(c) injecting water or brine into the wellbore; and

(d) letting the treatment fluid permeate a formation surrounding the well bore to form precipitates in the presence of water in the formation or the injected water or brine to reduce the outflow of water from the formation.